

CONSERVATION PLAN

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CONSERVATION PLAN



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CITY PLAN CASE NO. 24578

Adopted by City Council, December 20, 1973

*City planning
conservation*

*Los Angeles
" "*

DEPARTMENT OF CITY PLANNING

LOS ANGELES, CALIFORNIA



Harbor Regional Park, a haven for migratory birds.



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SUMMARY OF THE PLAN

This Proposed Plan conforms to Section 65302 of the California State Government Code which requires that cities and counties adopt a conservation element in their general plans by December 31, 1973.

For each section, objectives, policies, standards and programs are set forth, as appropriate. The Plan Maps are located at the end of the textual matter.

The Conservation Plan objectives, policies and programs are generally aimed toward the protection of the City's natural resources. It is recognized that a managed and controlled utilization of these resources is essential to the economic well-being of the City. Detrimental environmental effects, both short and long run, of such utilization must be avoided or alleviated when avoidance is infeasible.

The State law outlines subject areas which are to be included in various conservation plans. However, some of these subject areas are of minimal importance within the geographic boundaries of the City and are only briefly considered in the Plan. Other areas, including sections on air pollution, coastline erosion and archaeological site and paleontological deposit preservation are not specified by State Planning law but are included in the Plan.

Visual and aesthetic considerations have not been studied per se. It is recognized that these considerations are important and deserving of in-depth study. Therefore, it is recommended that as the future work program allows, a Visual/Aesthetic Townscape Plan be prepared as a sub-element of the Conservation Plan.

I. WATER

The State of California has preempted all local jurisdictions with respect to the control of water quality, both on land and ocean. Its control is exerted through the various regional boards of the State Water Quality Control Board. Standards are set and prescribed by law.

The Conservation Plan advocates the conservation of water by utilizing reclaimed wastewater, capture of stormwater runoff, as practicable and the impact minimization of additional numbers of flood control projects.

The main concern of the Plan is to preserve and conserve the supply and quality of all water resources of the City. Programs are recommended to reduce pollution from all sources and to restrict development when hazardous conditions warrant. Environmental Impact Reports are required for projects, or areas, where there is danger of polluting or contaminating the water resources of the City. Protection and preservation of the natural qualities of the Coastal Zone and the ocean for beneficial uses are key elements of the Plan. Research to determine appropriate alternative uses for waste sludge now deposited in the ocean is recommended.

II. FORESTS

The Plan deals primarily with municipal concerns over U.S. Forest lands within the City. It suggests criteria for inclusion of additional lands into the National Forest located within City boundaries.

III. SOILS

A section dealing with soils, especially soil erosion, includes proposals to regulate development in areas of high erosion potential, modifications to the



Subdivision Regulations, and control of private vehicles in off-road areas. Continued use of some lands within the City for agricultural purposes is recommended by the General Plan. Left unprotected, it is recognized that within 20 to 30 years there will be little agricultural land within the City.

Soil erosion is a potentially serious problem in hillside development. The Element recommends the continued application of mitigating measures to prevent erosion in those projects where it may be a significant problem. Areas of special concern are mapped.

IV. FISHERIES

The Plan recognizes the resource potential of marine life and suggests policies and programs to manage and enhance it. Important to increasing the diversity of marine life is the continued quality improvement of coastal waters through regulation of off-shore discharges.

Proposed by the Plan are recommendations to 1) require implementation of mitigating measures in projects that may have an adverse effect upon the marine environment; 2) retain natural watercourse channels open to the sea, consistent with safety within public areas; and 3) create artificial reefs to stimulate regeneration of marine life,

V. HARBORS

Recognized is the Harbor's primary function as a commercial and industrial facility while providing such recreational opportunities as are compatible with this requirement.

A management program is proposed for both commercial and recreational development occurring in the future, which may alter the quality of harbor marine and terrestrial ecosystems. Essentially, an understanding of the multiple-use functions representing competing interests of industrial, commercial, recreational and aesthetic uses of the Harbor is proposed. Management programs for obtaining scientific data on the marine ecosystems constituting the environment of the Harbor are also recommended.

Finally, the management system envisioned is one in which competing interests are resolved on the basis of priorities and value systems favoring the overall welfare of both the marine ecosystem and the human communities which it serves.

VI. WILDLIFE AND BOTANIC COMMUNITIES

Although urbanization has destroyed much habitat for wildlife within the City, substantial areas of various habitat types have been left relatively undisturbed. The continued existence of wildlife or unique botanic communities are sources of interest and pleasure to many citizens. To destroy the habitat upon which these organisms are dependent is to degrade the environment of which man is a part.

The Plan identifies ecologically important areas existent within the City and calls for action programs for their preservation. In the event a project is proposed within an ecologically important area, an Environmental Impact Report shall be prepared which shall indicate the extent of environmental damage (especially to flora and fauna) and consider the alternative of leaving the property in its natural state.

The Los Angeles County Environmental Resource Committee (ERC), an evaluation team of Southern California scientists, working under the auspices of the Southern California Academy of Science and the Los Angeles County Natural History Museum assisted the City in identifying both the criteria for ecologically important areas and identifying ecologically important sites. These areas will be found listed in the Background Report. The reader is also referred to the Background Report for the Official List of Rare and Endangered Animal Species.

VII. MINERAL RESOURCES

The Mineral Resources section deals primarily with sand and gravel, and crude oil and natural gas extraction. Major utilization of mineral resources within the City is presently limited to these two sectors. The enunciated policies pertaining to these sectors are intended to apply in principle to other mineral extractive activities that may occur in the future.

The sand and gravel extraction activities located in the City are important items in building and housing costs. The continued extraction of these resources in a controlled manner is suggested. Reclamation of sand and gravel extraction sites for recreation or open space uses is also proposed in the Plan.

Crude oil and gas extraction activities also have been of economic importance to the City. Recognized, however, is the potential detrimental environmental impact of extraction operations if they are not properly controlled. The Plan includes proposals for a ban on oil and gas exploration activities in off-shore areas and the City's beaches and for elimination of the distinction between urbanized and nonurbanized areas in the Municipal Code as they apply to future oil drillsites. All oil drilling activities should be properly buffered from surrounding areas. Unitization of existing oil reservoirs and drillsites is proposed.

VIII. PRESERVATION OF ARCHAEOLOGICAL SITES AND PALEONTOLOGICAL FINDINGS

Archaeological sites and paleontological deposits deserve protection and preservation in much the same manner as the natural resources considered in the Plan. This section deals primarily with forestalling or guiding development in areas of known locations.

IX. COASTLINE EROSION

Coordination with other jurisdictions in the placement of coastline structures is considered especially important. In addition to those areas covered by the California Environmental Quality Act, each environmental impact report should contain a comprehensive justification for the placement and maintenance of such structures.

X. AIR QUALITY

In addition to conforming with the standards and regulations of the Environmental Protection Agency, the State Air Resources Board and the Los Angeles County Air Pollution Control District, other specific actions can be taken by the City to increase air quality. The Plan proposes consideration of energy budgets for communities, study of the conversion of vehicles to gaseous fuels, promulgation of industrial performance standards through the Zoning Code, and limitation on allowable lighting within high rise buildings.



photo courtesy of: Los Angeles Department of Water and Power

Use of the Cascades to dissipate energy of overflow water.

PURPOSES AND USES OF THE PLAN

The Conservation Plan consists of this text and the accompanying maps entitled Water System Needs, Wastewater System Needs, Drainage System Needs, Mountain Fire Districts, Ecologically Important Areas, and Mineral Resources, and Recommended Phasing Guide, Sand and Gravel Extraction Activities. It is an element of the General Plan of the City of Los Angeles and conforms to the provisions of Section 65302 of the California State Government Code.



The Plan is designed to serve as an official guide for the conservation, development, and utilization of the natural resources located within the boundaries of the City of Los Angeles for the use of the City Council, the Mayor, and the City Planning Commission; other concerned governmental agencies; individual citizens and businessmen; and private organizations concerned with conservation. For the Council, the Mayor, and the Planning Commission, the Plan provides a reference to be used in connection with their actions on various City development matters, as required by law.

The policies and programs in this Plan are intended to provide direction and a course of future action for the City and its Departments. As such, this Plan is not intended to mandate the City, or its various departments to commence any new programs which may require the expenditure of man hours or funds. Any such actions called for in this Plan requiring additional funding must be brought individually to the Council through the budgetary process.

The Plan is intended to protect and enhance the public health, safety, welfare, and the quality of environment. Public projects and maintenance activities necessary to provide for the overriding public need, particularly emergency and protective operations, are not intended to be restricted by the Plan. Additionally, the Plan is intended to establish uniformity of policy and direction within local government concerning conservation of natural resources; and provide a basis for decision-making on proposals which, if implemented, will have a significant impact on the City's natural resources. The Environmental Impact Report accompanying this Plan is an informational document only. Its primary purpose is to describe the environmental effect of the adoption of the Plan and of the policies, objectives and programs contained therein. Environmental Impacts Reports (EIR) are required for projects or actions which significantly impact upon the resources dealt with in this Plan. Each department should be required to develop its guidelines and list of projects requiring environmental impact reports in light of the City's adopted guidelines on EIR's.

Plans such as the Water System Plan, Drainage System Plan, Sewerage Plan, and Open Space Plan and similar parts of the General Plan are concerned with specialized aspects of the conservation, development and utilization of the City's natural resources. The Conservation Plan specifically amends and updates the following elements of the General Plan: Water System Plan; Drainage System Plan; Sewerage Plan (now suggested for change to Wastewater System Plan).

Land use, transportation facilities, and public facilities are comprehensively treated in the various community and district plans. Community and district plans and other elements of the General Plan now being prepared, to be prepared or revised in the future shall be consistent with this Plan.

This Plan is subject to review and amendment, as necessary, to reflect changes in circumstances.

I. WATER

GENERAL OBJECTIVES

- 
- To continue to provide high quality water for domestic use in the City and to insure adequate water quality for all other beneficial uses.
 - To periodically reevaluate the City's water system facilities in order to reflect changes in the demand for water resulting from technological development, population projections and new land use patterns.
 - To develop criteria for the water, wastewater and drainage facilities in a manner that minimizes detrimental impacts upon ecological systems.
 - To utilize technologies to improve the water system in order to meet the increasing demand for water at economical rates.
 - To provide for orderly development through an integrated planning of water resources including: water facilities, water reclamation, water recharge, wastewater facilities and drainage facilities.
 - To develop policies, standards and criteria which will provide a basis for evaluating environmental impact.
 - To develop guidelines for utilizing water related facilities for limited recreation, consistent with their primary purpose.
 - To encourage dissemination of public information and education on methods of conserving water.
 - To encourage continued coordination between water and waste management agencies.

GENERAL POLICIES

- The City shall comply with water quality standards and waste discharge requirements as promulgated by the California Regional Water Quality Control Board, Los Angeles Region.
- Facility design standards for water facilities and water reclamation plants shall be continually reviewed and updated to reflect technological advances, population projections and methods of construction.
- In areas identified as having wastewater facility deficiencies, the City shall restrict future development, deny zone changes to higher densities and/or intensities, subdivision and Conditional Uses until these deficiencies are corrected.

STANDARDS AND CRITERIA

Drinking Water Standards

The United States Public Health Service has promulgated the Public Drinking Water Standards of 1962, applicable to drinking water and water supply systems used by carriers and others subject to Federal quarantine regulations. Within California, the Department of Public Health has adopted quality and monitoring standards for domestic water supplies.

Beneficial Uses of Water

Beneficial uses of water in the Los Angeles River Basin are established by the California Regional Water Quality Control Board, Los Angeles Region. Standards have been promulgated to protect the beneficial uses against quality degradation.

Protection of Water Quality

The State Water Resources Control Board and the California Regional Water Quality Control Board, Los Angeles Region, have the responsibility of determining objectives and requirements for the protection of the quality of water for all beneficial uses. Standards are established by the Regional Water Quality Control Board in their "Water Quality Control Plan (Interim)" and subsequent amendments are included (adopted) in this Plan by reference.

Some specific objectives and requirements intended to apply in this Plan concern:

1. Ocean Discharge
2. Source Control and Pre-treatment
3. Discharge to Tidal Waters
4. Discharge to Bays
5. Discharge to Estuaries
6. Discharge to Fresh Waters
7. Discharge to Groundwaters
8. Water Quality Objective for Surface and Tidal Waters
9. Water Quality Objective by the Los Angeles River
10. Water Quality Objectives by Solid Waste and Solid-Liquid Waste Disposal Sites
11. Water Quality Objectives for Ocean Waters
12. Temperature Objectives for Coastal Waters and Enclosed Bays and Estuaries
13. Discharge Prohibition
14. Water Quality Requirements for Water Discharge to Ocean Waters
15. Mass Emission Rates
16. Thermal and Elevated Temperature Discharge

Feasibility of Reclaiming Wastewaters

Reclaimed sewage, or wastewater, must be considered a water resource. The criteria for evaluating wastewater, as a source of water for whatever purpose, include reliability, economics, and aesthetics.

Criteria for Classifying Disposal Sites

In order to protect ground water quality and insure that the City's existing wells in areas near solid waste disposal sites continue to be protected, various criteria should be used in locating future sites and in evaluating Conditional Use permits on existing sites. These criteria are set forth in the State Water Code and applicable sections of the California Administrative Code.

Criteria for Determining Needed Wastewater Projects

Wastewater projects should be scheduled according to the following criteria suggested by State Water Resources Control Board:

- a. Projects that have been issued cease and desist orders by the State Water Resources Control Board.
- b. Those needed to correct an existing water quality or water pollution problem or to conform to an areawide wastewater collection plan will be scheduled at the earliest practicable date.
- c. Projects affecting a common receiving water or that can be logically included in an areawide or consolidated system will be scheduled as close together in time as water quality needs permit.
- d. Treatment plants nearing flow or treatment design capacity will be scheduled so the expanded facilities will be available before a problem develops.

- e. Water reclamation projects which beneficially improve water quality and which conserve water resources through feasible reuse will be scheduled as soon as practicable.

Landscaping will enhance the environment of the proposed Sepulveda Water Reclamation Plant.



photo courtesy of: Daniel, Mann, Johnson and Mendenhall

Flood Control Development Criteria

The U.S. Army Corps of Engineers is responsible for improvement of larger streams running through the City. Corps projects are built to protect against more severe storms than are those of the Flood Control District and the City. The Los Angeles County Flood Control District's channels are built to accommodate the waters of a "Capital" or fifty-year storm. The City and the District normally design their underground drainage facilities to provide relief from the effects of a storm of ten-year frequency.

The construction of projects in which the public will take pride and the provision of attractive surroundings for the enjoyment of the public are criteria considered by all flood control agencies. A program for preserving, restoring, and enhancing the natural beauty of areas through which flood control channels are constructed is desirable. Continual concern and effort should be directed toward a goal of environmental beautification. Flood control facilities in new subdivisions should incorporate improved design criteria stressing more natural appearance of such devices.

Secondary to the main purpose of protection of life and property from flood, consideration should be given to possible multiple uses of lands bordering flood control channels, i.e. equestrian and biking trails.

GENERAL PROGRAMS

- Where existing water or sewer facilities are inadequate, the City should continue to restrict building permits and regulate private development so that it will not place excessive loads on existing sanitary facilities prior to their expansion.
- The City shall continue to maintain an inventory on developed and undeveloped areas not yet serviced by sanitary sewers.
- The City should continue to cooperate in the regional coordination of water supplies and wastewater disposal systems.
- The City should implement the wastewater projects indicated in the Capital Improvement Program in order to provide capacity requirements, meet water quality standards, and to upgrade facilities where there is an existing capacity deficiency.

A. WATER AND ITS HYDRAULIC FORCE

OBJECTIVES

- To set forth policies for the use of land in areas subject to hydrological hazards, such as flood plains.
- To provide for the continued development and improvement of the Los Angeles drainage system in order to protect life and property from damage and destruction by flooding.
- To develop programs for preserving, restoring, and enhancing the beauty of areas when flood control channels are constructed.
- To develop programs for preserving, restoring and insuring the natural flow of flood waters without artificial channelization, wherever feasible.

POLICIES

- To the extent practicable, the City shall continue to protect the quality of the water supply contained in storage reservoirs by separating storm runoff from the reservoirs.
- Consistent with public health, safety and economics, the City shall encourage the maximum conservation of storm water runoff.
- The City shall restrict uses on lands subject to inundation.
- Flood control projects shall be limited consistent with public health and safety. Where practicable, beautification techniques shall be implemented and elements of natural channelization employed.
- In cooperation with the U.S. Army Corps of Engineers and the Los Angeles County Flood Control District, this City shall encourage the control and full beneficial use of flood waters, the prevention of damage by flood waters and the washing away of stream banks by such waters.

PROGRAMS

- The City should request the Army Corps of Engineers to fully restore Hansen Dam by dredging to protect life and property and to provide a full range of recreational activities.
- To the extent feasible, the City should consider providing for the treatment of storm runoff water, perhaps through the combined use of holding areas and treatment facilities.

- In order to protect life and property from damage and destruction by flooding, the City should use its powers of land use regulation and zoning to control urban development in flood hazard areas in preference to construction of flood control facilities.
- The City should insist that periodic safety inspections be continued on all dams including critical dams located outside the City and reports be made available to the City.
- The City should advocate that the Los Angeles County Flood Control District continue its programs of water conservation in conjunction with their primary purpose of flood control and preservation.

B. WATER QUALITY AND WATER RESOURCES

OBJECTIVES

- To facilitate and encourage the conservation of the City's water resources: imported water, groundwater, and wastewater.
- To determine compatible land uses for land adjacent to reservoirs, groundwater recharge areas, water wells, etc., in order to protect the quality of water.
- To provide water quality commensurate with the intended use.
- To identify geographical areas of concern with respect to the elimination of contamination and/or pollution of groundwater and receiving waters.
- To maximize the conservation of water tributary to the Los Angeles drainage system.

POLICIES

- The City shall continue to support studies to determine the effects of waste discharge on water quality.
- The Department of Water and Power shall continue to strive for multiple uses of the land along water routes, consistent with their primary purposes.
- Prior to discharge into the wastewater system, the City shall require that toxicants be removed from industrial waste commensurate with the standards of the State Water Resources Control Board; those that cannot be removed at the treatment plant shall be removed at the sources.
- Industrial waste handling shall be regulated so as to insure that toxic or other detrimental material entering the wastewater system is held at a level not adverse to ultimate water uses or receiving water requirements. Such regulation shall be conducted in coordination with the respective County agencies.
- The City shall continue to monitor groundwater levels and quality in order to insure against overdraft and/or possible degradation.
- The City shall ensure that compatible water quality conditions are maintained in areas of ecological importance.
- The City shall require appropriate measures for the conditional use approval of solid waste disposal sites in order to protect groundwater quality. Such measures shall include the permitted depth of such sites.

- The City shall protect the public health and welfare by maintaining continued separation of the drainage system and the wastewater system.
- The City shall continue to maintain effective street cleaning procedures. Strict enforcement of existing anti-litter regulations shall be encouraged.

PROGRAMS

- Monitoring programs of the Department of Water and Power and the Department of Public Works should be continued to ensure water quality commensurate with the requirements for the use to which the water is to be put.
- Continue participation in the Watermaster Service (A service to control the extraction of groundwater from a water basin).
- Extensive agricultural uses along routes transporting the City's water supply should be prohibited if incompatible with their primary use.
- The Department of Water and Power shall continue to evaluate the nitrate content of City water drawn from wells in the Sunland-Tujunga area.
- The City should coordinate testing of various products for chemical ingredients which may be a health hazard in water reuse. If these tests indicate such a hazard, steps should be taken to prevent their use in the City.
- The City should continue to control dumping into flood control channels to reduce the possibility of "bootleg" dumping which does not meet State standards.
- Where industry produces pollutants in excess of City standards, the City should require that the waste generator remove, or pay for the removal of, that portion of his pollutants which will have an adverse effect on the receiving stream or subsequent reuses of the water.
- The City should encourage research by private interests into the recovery of valuable by-products from industrial waste discharges, some of which might be more feasibly recovered than treated.
- Now that adequate alternative products are available, the sale and application of persistent (chlorinated hydrocarbon) pesticides by all users should be prohibited in the City.
- The City should review all chemical and hydrocarbon pipe line systems within the City to determine if new controls are needed to prevent leakages into groundwater supplies.
- The City shall support the Regional Water Quality Control Board in a program to indicate the constraints on location of solid waste disposal sites caused by proximity of groundwater supplies and recharge of percolation basins.
- Investigate the economic feasibility of acquiring vacuum cleaning equipment for street cleaning.
- Seek funding to permit a more adequate schedule of street cleaning throughout the City.
- Encourage the advertising media to include street cleanliness as a topic of public education in their public service messages.

C. WATER RECLAMATION AND WATER RECHARGE

OBJECTIVES

- To utilize appropriate standards for water reclamation and water discharge in order to protect water as a resource for all beneficial uses and to preserve the natural environment.
- To achieve the optimum practical use of fresh water through wastewater reclamation and reuse by industries, municipalities, and agriculture.
- To develop appropriate programs for the replenishment of local groundwater supplies.
- To maintain either adequate groundwater levels or barrier protection to preclude seawater intrusion.
- To upgrade the quality of the City's waste treatment system to assure effluents which meet the State and Federal standards.

POLICIES

- The City shall encourage the use of wastewater reclamation and reuse systems which assure the maximum benefit from available water resources.
- When wastewater treatment plants are constructed or upgraded, they shall incorporate the best available technology.
- The City shall require that sufficient information be supplied for the preparation of an Environmental Impact Report on any project which may have a substantial effect on the quality or quantity of the groundwater supply.
- Groundwater replenishment shall be with water of appropriate quality.
- The City shall continue its pilot program to evaluate the use of appropriately treated reclaimed water for use as sea water barriers.
- The City shall continue to limit and restrict the issuance of permits for septic tanks and require sewer connection as sewers are available.
- The City shall continue to encourage the use of up-stream water reclamation plants for the purpose of providing renovated water for reuse.

PROGRAMS

- The Departments of Public Works and Water and Power should continue to coordinate their respective treatment facilities and operational procedures to assure maximum efficiency.
- The Bureau of Sanitation, Department of Public Works, should continue to maintain strict standards on the industrial waste effluent it will accept into the sewer system for treatment. More stringent controls should be considered for effluent which will go to water reclamation plants for treatment.
- The City should continue feasibility studies regarding the segregation of industrial wastes from domestic wastes for reclamation purposes.
- The Department of Water and Power should continue to develop distribution facilities and marketing arrangements for the potential users of reclaimed water.

- The City should continue studies into the design of tertiary treatment facilities to provide the most feasible level of reliability current technology offers.
- The Department of Public Works should continue the basic treatment of raw wastewater to produce a legally disposable effluent.
- The Department of Water and Power should continue studies of the water quality transformations that will occur in soil, particularly in areas planned for surface spreading.
- Studies should be conducted to assess alternative methods for treatment of urban stormwater.
- Participate in plans to use reclaimed water in sea-water barrier projects.
- Continue to conduct studies on the feasibility of utilizing urban stormwater and reclaimed water for groundwater recharge.
- Investigate the advisability of eliminating septic tank and cesspool use within the City.

D. PROTECTION OF WATERSHEDS, BEACHES, AND THE OCEAN

OBJECTIVES

- To assure the continued preservation and protection of watershed areas in the hillside areas of the City to the extent feasible.
- To develop criteria to facilitate an optimum combination of land uses in the coastal zone.
- To insure that effluents discharged into the ocean contain no constituents which are hazardous to human life, aquatic life, or the food chain.
- To develop alternatives to the ocean discharge of sludge.

POLICIES

- Hillside areas of the City shall be controlled and regulated in order to minimize grading and flood control projects and to limit sedimentation and soil erosion.
- The City shall vigorously participate in the formulation of policies and criteria for evaluation of developments within the permit areas of the South Coast Regional Coastal Zone Commission.
- Subject to adequate controls, the use of solid objects to rehabilitate or enhance the marine environment shall be encouraged.
- The City shall ensure that ocean discharge from wastewater treatment and disposal facilities is neutral or beneficial to the marine environment.
- The City shall ensure that ocean outfalls and diffusion systems provide rapid initial dilution and effective dispersion.
- The City shall continue to require permits and monitor all industrial plants discharging heated water to ensure that detrimental effects of thermal pollution will not occur.

III. SOILS

OBJECTIVES



- To prudently utilize the inherent capabilities of all soil groups to serve both short- and long-term interests.
- To continually integrate geologic knowledge about soil behavior into the Building Code and the planning and zoning process.
- To identify areas where there are critical soil conditions relating to potential erosion, groundwater contamination, and the like.
- To expand existing standards and criteria to insure maximum protection of the soil mantle and vegetative cover in areas of development.
- To regulate grading so as to preserve the natural terrain.

POLICIES

- All development within the areas of potential soil erosion hazard indicated on the map shall continue to meet soil test criteria, standards and procedures required by the Bureau of Engineering and Department of Building and Safety.
- In areas of high erosion potential, development shall be minimized or, where feasible, avoided.
- The City shall consider soil capabilities and limitations when evaluating zone change requests.
- The City should assure that land is maintained in agricultural use where so designated by the General Plan.

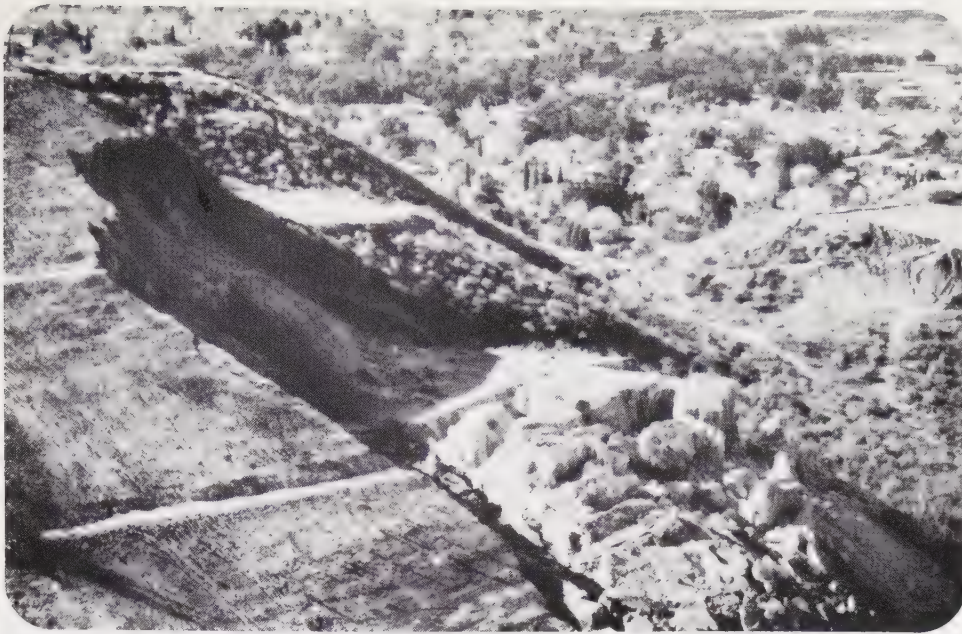
STANDARDS

The *Los Angeles City Building Code* sets forth the specific requirements of any individual engaging in grading and concomitant activities. Subjects covered in the ordinance are adopted by reference and include the following:

- Limitation of soil export and import in hillside areas
- Excavations
- Fills
- Planting and irrigation of hillside areas
- Erosion control and drainage devices
- Areas subject to slides and unstable soils

PROGRAMS

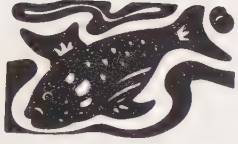
- Prohibit the use of privately-owned vehicles in off-road areas that are susceptible to erosion, particularly the officially designated hillside districts. Specially designated areas should be provided for recreational vehicles such as off-road vehicles (ORV), cycles, bicycles, etc.
- Commence soil studies of Griffith Park to determine the assimilation capacity of the soil to accept wastewater.
- Where feasible, excess land buffers surrounding airports should be devoted to uses that will minimize soil erosion on the vacant land.
- Studies should be continuously made to achieve better slope stabilization. New forms of stabilization should be researched, tested, and implemented when feasible.



- Continue the educational and public information program through the Building and Safety Department to inform hillside residential dwellers on their responsibility and the methods to maintain slope stability.
- Consider modifications to the Grading Ordinance with respect to limitations on nuisance factors regarding dynamiting, dust, and permitted hours of work.
- Insure adequate on-site inspection, control, and adherence to established rules and regulations involving grading.
- Apply for provision of the Williamson Act to help maintain land in agricultural use.
- Regulate developments in hillside and mountainous areas in order to minimize grading, preserve the natural terrain, and maximize open space.
- Consider modifications to the Subdivision Regulations, *Los Angeles Municipal Code*, such as the following:
 - Approve only minimal grading which relates to the natural contour of the land and which will round off, in a natural manner, sharp angles at the top and ends of cut and fill slopes, and which does not result in successive padding or terracing of building sites.
 - Consistent with fire regulations, require maximum retention of trees and other vegetation which stabilize steep hillsides, retain moisture, prevent erosion, and enhance the natural scenic beauty, and, where necessary, require additional landscaping to enhance the scenic and safety qualities of the hillsides.
Require appropriate planting to maintain and stabilize cut and fill slopes.
 - Require maximum retention of natural topographic features and qualities of scenic, geologic, or historic interest that enhance the character of the area, including the natural skyline.
 - Impose appropriate conditions on the size of areas to be graded or to be used for building, and on the development of all slopes to ensure conformance with these policies.
 - Encourage changes in the grade and alignment of proposed streets or in the proposed size and configuration of lots in order to achieve the purposes of these policies.

IV. FISHERIES

OBJECTIVES



- To recognize offshore fisheries as a beneficial use of the marine environment and to minimize the detrimental impact of private or public projects upon them.
- To preserve unique scientific, ecological, and educational opportunities in the coastal/offshore environment.

POLICIES

- The City shall continue to upgrade its Terminal Island treatment facility to ensure that Inner Harbor waters shall continue to meet standards of dissolved oxygen as set by the California Water Quality Control Board, Los Angeles Region.
- The City shall make every attempt to retain natural watercourses in construction of canals or channels that have access to the open sea.
- The City shall vigorously continue to enforce laws against oil spillage within coastal areas under its jurisdiction and proceed with necessary actions against all offenders.
- Coastal areas containing ecological or scenic resources of significant value should be preserved within state wilderness, state reserves, state parks or natural preserves.

PROGRAMS

- Consider the sinking of solid objects in the Santa Monica Bay and other ocean areas for the creation of artificial reefs.
- Continue to cooperate with public agencies or scientific organizations researching the offshore environment through technical assistance and by joint powers agreements.
- Now that adequate alternative products are available, prohibit the use and sale of chlorinated hydrocarbon pesticides within the City of Los Angeles to prevent detrimental effects upon marine resources. Urge that similar action be recommended to other municipalities by the Southern California Association of Governments (SCAG).
- Urge the State of California to grant additional funding for the maintenance of the Point Fermin Marine Life Refuge.
- Investigate the feasibility of establishing sea farming experiments in the inshore areas of the Los Angeles coastline.
- Determine the feasibility of establishing underwater parks in unique ocean areas adjacent to the City's beaches.
- Recommend a restudy by the California State Water Quality Control Board on the location of areas of significant marine life off the City coastline.
- Support Federal legislation that will set standards on waste discharge from vessels with foreign registry.

V. HARBORS

OBJECTIVES

- To recognize and maintain the Port of Los Angeles as a viable commercial and industrial port facility.
- To maintain and enhance the ecosystem in the City's harbor waters to the extent feasible.
- To provide recreational opportunities within the Port of Los Angeles consistent with its primary function as a commercial and industrial facility.

POLICIES

- The Los Angeles Harbor is recognized as an important economic resource and its continued development consistent with the maximum feasible conservation of marine life within the harbor is encouraged.
- The City must meet water quality standards (or objectives) set forth by the State Water Resources Board and the California Regional Water Quality Control Board, Los Angeles Region for harbor waters.
- An environmental management system in which competing interests are resolved on the basis of priorities and value systems favoring the overall welfare of both the marine ecosystem and the human community which it serves shall be developed.
- Dredging operations shall be conducted in a manner most likely to minimize the spread of sediment containing toxic substances.



Los Angeles Harbor, recreational uses at Cabrillo Beach.



- Additional recreational facilities shall be provided in the Port of Los Angeles consistent with the primary function of the harbor as a commercial and industrial port facility. These should be located and designed so that they are accessible to large numbers of people.
- Where feasible, recreational uses shall be separated from other port activities.

STANDARDS

The State Water Resources Board and the California Regional Water Quality Control Board, Los Angeles Region have established standards, water quality objectives and a specific plan for Los Angeles Harbor waters dealing with bacterial content, dissolved oxygen (DO), water temperature, toxicity, turbidity and other materials.

PROGRAMS

- Geological, physical, chemical and biological parameters of the Harbor's environment should be monitored regularly in order to determine major periodic variations affecting the biotic communities and their life cycles including, but not limited to, the following:
 - a. Geological monitoring should include core sampling.
 - b. Physical parameters to be monitored should include but not be limited to: temperature, turbidity, color, odor, particulate matter, wave action, tidal flows, period of flushing and current variations in direction and speed.
 - c. Tidal prisms should be determined in order more accurately to predict flushing and water flow phenomena.
 - d. Chemical parameters which should be monitored regularly should include, but not be limited to:

[NO₃], [PO₄], chemical oxygen demand (COD), hydrocarbons, ionic strength or osmotic pressure, salinity variations and heavy metals.
 - e. Biological parameters monitored regularly should include but not be limited to: biological oxygen demand, coliform and other bacterial pathogen counts, nekton, plankton, neuston and benthic samples.
- Studies in primary productivity of the harbor ecosystem, yielding data on energy captivation of photosynthetic phytoplankton through use of isotopic techniques, should be instituted.
- The Harbor Department investigation and research program should be expanded to determine whether the dredging of organic sludge in the harbor would allow the establishment of benthic habitats presently prevented due to the toxic qualities of harbor sediment.
- Further studies to determine environmentally feasible methods to dispose of dredge sludge should be instituted.

VI. WILDLIFE AND BOTANIC COMMUNITIES

OBJECTIVES

- To identify and consider acquiring ecologically important wildlife habitat areas.
- To keep ecologically important areas in a natural state, consistent with the public need, health and safety.
- To maintain native animal and plant populations in those regional public facilities where they now exist.
- To continue existing programs for relocating wildlife found to be noncompatible from residential areas.



POLICIES

- The City shall restrict land uses in important wildlife habitat areas (see map).
- Maintenance of wildlife feeding areas on City-owned property shall be encouraged.
- The City shall establish close coordination with the Forest Service on land in and adjacent to the Angeles National Forest.
- The establishment of wildlife preserves in areas containing rare or endangered wildlife species shall be encouraged.
- The City shall consider development of land use classifications, as necessary, to assure protection of important natural wildlife habitats or botanic communities.
- All government agencies shall be encouraged to include areas identified as key wildlife areas or areas containing unique plant life for purchase.
- The use of privately-owned off-road vehicles in identified key wildlife habitats and unique plant life areas shall be prohibited.
- In key wildlife areas and/or ecologically important areas, tentative subdivision maps shall be submitted to the appropriate agencies for review of possible damage to wildlife habitat and violation of laws with respect to endangered species.
- The City shall consider of paramount importance the preservation and protection of key wildlife areas and/or ecologically important areas, as identified in this Plan, in the design and construction of roads, if roads must be constructed into these areas.

Hansen Dam and Big Tujunga Wash area.





PROGRAMS

- Prepare and adopt an ordinance similar to the City's law pertaining to cultural and historical monuments providing the City with the ability to temporarily forestall development to protect designated ecologically important areas.
- Post wildlife signs in parks where necessary.
- Continue the City's program of returning native animals to their natural habitat.
- Enact an ordinance preventing privately-owned vehicle use in identified key wildlife habitat and unique plant life areas.
- Consider amending the zoning ordinance, where necessary, to restrict intensities of land uses that may be detrimental to unique plant types in areas identified in the Conservation Plan.
- Establish priorities and seek funding from all appropriate jurisdictions to purchase sufficient quantities of land to protect areas deemed ecologically important.
- Request the State to subvene to the City funds collected from citizens for the purchase of personalized automobile license plates for the acquisition of ecologically important areas. If the State will subvene these funds, encourage automobile owners interested in conservation to purchase these plates.
- Encourage the Forest Service to conduct studies of areas which might be included within the boundaries of the Angeles National Forest.
- Encourage the designation of specific areas within the City for the use of privately-owned off-road vehicles.

VII. MINERAL RESOURCES

OBJECTIVES

- To provide for the proper conservation, development, and utilization of the City's mineral resources.
- To minimize the detrimental effect on the environment of mineral resource extraction operations.

POLICIES

- The City's primary mineral resource extraction activities concern petroleum and sand and gravel operations. This Plan concentrates, therefore, on these areas. However, the objectives, policies, and programs contained herein, in principle, apply equally to other mineral resource extraction activities that may occur in the City.
- A report shall be required when an application is filed with the City for discretionary approval for any mineral extraction or related activity, e.g. hydrocarbon, sand and gravel, etc. Such reports shall be reviewed by the City and shall include full disclosure on the exploratory program and total evaluation of the results including, but not limited to the following: logs of borings, analysis of material, rate of utilization, and expected date of resource depletion.
- Periodic reports shall also be submitted on existing or proposed activities which have already been granted discretionary permits and for which exploratory programs have been completed; such reports shall emphasize quantities extracted. Appropriate procedures shall be developed to maintain confidentiality of reports.



A. SAND AND GRAVEL

OBJECTIVES

- To provide necessary guidelines for the effective control and utilization of sand and gravel resources to minimize both short and long run detrimental environmental impacts of extraction and associated operations.
- To identify those operations which pose the most serious environmental problems and to suggest appropriate remedies.
- To require reclamation of land where extraction operations are or have taken place for the purpose of insuring public health and safety.
- To require aesthetically pleasing buffers and screens from extractive operations.
- To protect ground water from contamination as a result of extractive operations.

POLICIES

- In order to minimize the adverse environmental impact of extractive industries, the City should adopt standards whereby the short term impact of such industries can be overcome and provide positive benefits to the City. The unavoidable temporary impacts should be minimized.

- Sand and gravel extraction and transport shall be discouraged wherever it is apparent that a noise and/or dust problem will substantially disrupt or inhibit adjacent uses or reduce the value of adjacent uses or parcels by limiting the uses which are possible on those parcels. Satisfactory remedial actions shall be required if extraction is to be allowed to occur.
- Sand and gravel extraction shall be prohibited wherever there is reasonable doubt as to the geological hazards which may result from such extraction.
- Sand and gravel extraction shall be prohibited wherever it is determined that there may be significant adverse effects on the quality of the water table.
- The City shall impose beautification conditions in granting conditional uses, permits, etc. for the operation of an extractive industry.
- A variety of implementation methods shall be utilized to ensure site reclamation. The determination of land use shall be made in the community planning process.
- The City shall encourage the reclamation of appropriate extractive sites for future park or open space utilization, where the Community Plan so indicates.

Sand and gravel extraction.



- The City should encourage utilization of phasing of extractive activities as a tool to assure that only small areas are affected by such activities at one time.
- No sand and gravel extraction shall be permitted in the Big Tujunga Wash east of Hansen Dam Flood Control Basin to the Angeles National Forest boundary during the life of this Plan (1990).

STANDARDS AND CRITERIA

In order to minimize the adverse environmental impact of sand and gravel extraction, the following procedures shall be required:

1. Determine location of processing plant area and type of screening essential to reduce the inherent conflicts with adjoining or nearby uses.
2. Construction of screens of either plant materials or overburden piles where it has been determined that visual or other conflicts such as dust and noise may occur.
3. Determine the pattern of excavation that will implement the development of the proposed land forms and subsequent land uses.
4. Stockpile overburden material in areas designated for future land forms or in excavated areas where the material will be spread over the pit floor.
5. Progressively develop excavated areas by grading the land forms and stockpiles to desired grades.
6. The seeding and planting of developed land forms immediately after grading is completed or within appropriate planting seasons shall be required.
7. Remove all equipment associated with the industry as soon as excavation is terminated.

PROGRAMS

- Determine and evaluate the alternative uses, limitations, and development requirements for sites in the Tujunga Cone, considering the criteria for protection of quality of the watertable, technological and economic feasibility, and surrounding land uses.
- Use the recommended phasing in Plate VI-A (Recommended Phasing Guide) as a basis for actions on zone changes, conditional uses, and/or gravel districts for extractive activities.
- Adopt specific municipal regulations to require and assure site reclamation as a condition of extraction approval.
- Adopt specific municipal regulations to provide additional fencing and landscaping for gravel extraction sites.
- Modify the *Zone Code* to require sand and gravel extraction activities to conform to the industry standards, where the latter are more restrictive.
- Investigate and evaluate the range of open space acquisition techniques which can be applied to gravel extraction operations, especially in the Tujunga Cone and Tujunga Wash.
- Investigate the potential use of the Hansen Dam sand and gravel deposits, while fully considering methods whereby possible adverse environmental impact of such utilization can be minimized.

B. CRUDE OIL AND GAS DEVELOPMENT

OBJECTIVES

- To provide necessary guidelines for the effective control and production of oil and gas resources to minimize both short and long run detrimental environmental impacts of extraction and associated operations.
- To identify those operations which pose the most serious environmental problems and to suggest appropriate remedies.
- To provide aesthetically pleasing buffered screens from production activities.
- To ensure the public health, safety, and welfare while providing for reasonable utilization of the City's oil and gas resources.
- To ensure that oil and gas producing activities are compatible with orderly urban development and a desirable community environment.

POLICIES

- Petroleum extraction activities and facilities shall be regulated in such a manner as to ensure their compatibility with the surrounding community.
- The City shall require full disclosure of all planned petroleum exploratory and production activities before approval of any such activity.
- Future oil extraction activities shall be banned at surface locations on beach and offshore waters within the City's jurisdiction.
- All future consideration of drilling sites and petroleum production activities shall be governed by the rules and regulations in the City's Municipal Code pertaining to urbanized areas.
- Unitization of producing reservoirs and facilities, removal of petroleum by pipe and beautification of drill sites and ancillary facilities in non-urbanized districts shall be encouraged by the City.
- Subsidence controls shall be exercised.
- In order to conserve energy sources, the City shall continue to encourage petroleum producers to improve extraction techniques to promote efficiency and reduce the nuisance aspects of these operations.

STANDARDS AND CRITERIA

The provisions of the City's *Fire, Building and Zoning Codes* applicable to petroleum producing operations are considered desirable and are adopted by reference.

PROGRAMS

- City Codes should be amended to:
 1. Ban oil drilling on beaches and offshore within the City's jurisdiction.
 2. Eliminate the non-urbanized area distinction as it pertains to future petroleum producing operations.
 3. Require precise surface leveling surveys as oil fields are depleted to determine the behavior of the ground surface and invoke appropriate subsidence controls.
 4. Require full disclosure of anticipated activities and environmental impact.
 5. Prohibit the practice of dumping brine and waste materials from oil extraction operations into the City's sewerage and drainage systems.
- Studies leading to a beautification program, financed publicly and/or privately, for improving the appearance of unsightly well sites should be undertaken and the results thereof implemented.
- A study determining the feasibility of using wastewaters of suitable quality for injection should be undertaken.
- The City should urge that the appropriate authorities of higher jurisdictions make necessary studies and formulate policies, standards and programs for conservation of the nation's energy resources. The City should actively cooperate in these studies, when and if they take place.

Beautification of an oil well under the urbanized category.



VIII. PRESERVATION OF ARCHAEOLOGICAL SITES AND PALEONTOLOGICAL FINDINGS

OBJECTIVES

- To identify and conserve worthy archaeological sites and paleontological deposits in the City.
- To promote public appreciation in the local works of Man and of the intrinsic values inherent in preserving these works for scientific examination and general viewing.
- To assure the scientific study of significant archaeological and paleontological sites, in cases where they cannot be preserved.



POLICIES

- Priority in the preservation of archaeological sites shall be given to those in danger of accelerated decay, those threatened by development, and those of unique scientific significance.
- Endangered archaeological and paleontological sites shall be protected by an ordinance that provides for permits, procedures, and provisions for salvage excavations of sites to be adversely affected.
- Upon application for grading, or building, demolition, or other construction permits, the Cultural Heritage Board shall be notified of any known archaeological or paleontological sites. If any such sites should be discovered during the course of work performed under permits, the Cultural Heritage Board shall be promptly notified.
- The City shall attempt to avoid disturbance of archaeological sites or destruction of paleontological deposits. In the event this is not feasible, the City shall notify organizations such as the Natural History Museum and local universities to allow sufficient time to study the site.
- Environmental impact reports and negative declarations shall include consideration of archaeological and paleontological remains. Where such sites are present, the EIR shall contain mitigation measures for direct and indirect adverse effects.

PROGRAMS

- Expand duties and powers of the City's Cultural Heritage Board to include responsibility for the preservation of archaeological sites and paleontological deposits.
- Conduct a comprehensive study on archaeological sites and paleontological deposits and establish priorities for their protection.
- Delimit on maps of appropriate scale archaeological sites and paleontological deposits.
- Enact zoning provisions to protect areas of known archaeological value.
- Sponsor the establishment of a private non-profit organization for the purpose of acquiring and preserving archaeological sites and paleontological deposits.

IX. COASTLINE EROSION

OBJECTIVES

- To promote the beneficial uses of the coastline consistent with its conservation as a precious natural resource.

An example of sand build-up and erosion on both sides of a rock barrier.



- To preserve, to the maximum extent feasible, the ecological balance of the coastline.

POLICY

- The City shall seek to coordinate coastal protection measures with the South Coast Regional Coastal Zone Commission and other coastline jurisdictions.

PROGRAMS

- Study methods for facilitating the controlled flow of storm water-borne sediments to the coast consistent with the maintenance of flood control facilities.
- Investigate the feasibility of establishing joint powers agreements for comprehensive coastal management.
- Prepare a Shoreline Plan as an element of the General Plan.

X. AIR QUALITY

The City recognizes the preemption in the field of air quality control by the Environmental Protection Agency, the State Air Resources Board and the Los Angeles County Air Pollution Control District. However, there are still actions the City can take to improve air quality and these are set forth in this section.

OBJECTIVES

- To meet air quality standards established by law.
- To seek additional standards, criteria and controls whereby the negative physiological, aesthetic, and economic effects of air pollutants on City residents can be further reduced.
- To pursue all practical means of reducing emissions within the framework of effective transportation and stationary sources.

POLICIES

- The City shall continue to investigate the utilization of alternative power sources including, but not limited to, nuclear, solar energy, and fuel cell conversion of energy.
- The City shall strongly support actions which will result in the allocation of public resources to develop a comprehensive urban transportation system with minimal pollution.



- The City shall work through all available means to improve the level of service and efficiency of all phases of transportation.
- The City shall require the development plans for high energy users be reviewed by the Department of Water and Power to determine adequacy of the power supply.
- Plans and programs which increase the efficiency of and minimize energy utilization by residential, commercial, and industrial users shall be encouraged.
- Where possible, the City shall encourage densely planted open space buffers at least 150 feet wide to assist in the absorption of air contaminants on both sides of all new freeways.

STANDARDS

The Standards presently promulgated by the Environmental Protection Agency and the California State Air Resources Board are adopted by reference.

PROGRAMS

- Urge the Congress and the Legislature to require the sale of low polluting automotive fuels and engines.
- Seek the extension and improvement of mass transportation facilities where air quality improvement can be projected.
- Seek immediate funding for additional buses as an interim measure until construction on a mass rapid transit system can begin.
- Seek funding for the construction of peripheral parking facilities to serve high-intensity Centers.
- Encourage the implementation of a work week which will disperse peak hour concentration of traffic.
- Encourage the planting and eventually require the use of those plant materials for freeway and street beautification found to be effective in absorbing air pollutants.
- Urge continuation of feasibility studies on completely switching present fuel utilization: automobiles to utilize gaseous fuels and industries and power plants to burn non-leaded gasoline.
- Revise zoning and building code provisions to include performance standards dealing with air quality.
- Require new residential or commercial development to meet these performance standards or emissions.
- Revise building codes to require better insulation in public and private structures, careful attention to sunlight orientation, and better control of internal heat sources.
- Establish an advisory committee composed of architects, building contractors, Department of Building and Safety personnel and utility personnel, both public and private, for the purpose of determining standards of energy utilization.
- Institute a study program to determine the maximum energy level for each community area, similar to maximum density or commercial/industrial floor space concepts.

- Continue studies on the effect Daylight Savings Time has on energy usage and air pollution during summer months.
- Consider an ordinance reducing the use of lighting within high-rise buildings for the purpose of conserving the amount of energy required to cool office buildings.
- Study the feasibility of applying controls such as Conditional Use on high-rise office and residential developments or other large-scale projects.
- Consider limiting the amount of energy used for advertising billboards and signs.
- Seek State legislation to require all home electrical appliances sold within California to carry efficiency ratings.
- Seek legislation to amend Air Pollution Control District rules to eliminate the concept that regulations apply to "units", not to all the machinery on one site (i.e. stationary source of emissions).
- Conduct a study of land use to determine effects of development on air quality.
- Seek funding to develop air quality simulation models which would relate population growth, land use, industrial activity, pollution from vehicular and stationary sources, circulation patterns, and air movement.
- Promote studies to determine the proper mix of measures to achieve air quality standards; such measures should contain a balance of integrated programs.
- Encourage the use of bicycles for transportation purposes as well as recreational use by providing safe bikeways with convenient and secure bicycle parking facilities at major buildings.



Special acknowledgement is given to the several members of the Urban Problems Committee of the General Plan Advisory Board and their department managers for supplying technical expertise for the completion of this Plan.

In compliance with Section 65302 (d) of the California Government Code, consultation was had with the following agencies concerned with the development, distribution, control, and conservation of water:

City of Los Angeles
Department of Water and Power
PAUL H. LANE, Chief Engineer of Water Works
and Assistant Manager

City of Los Angeles
Bureau of Sanitation
ROBERT D. BARGMAN, Director

Los Angeles County Flood Control District
ARTHUR BRUINGTON, Chief Engineer

City of Los Angeles
Bureau of Engineering
DONALD C. TILLMAN, City Engineer

State of California, The Resources Agency
California Regional Water Quality Control Board
Los Angeles Region
RAYMOND HERTEL, Executive Director



TOM BRADLEY, mayor

LOS ANGELES CITY COUNCIL

John S. Gibson Jr., president
Ernani Bernardi
Marvin Braude
David S. Cunningham
Edmund D. Edelman
John Ferraro
Gilbert W. Lindsay
Donald D. Lorenzen
Billy G. Mills
Louis R. Nowell
Pat Russell
Arthur K. Snyder
Robert J. Stevenson
Joel Wachs
Robert M. Wilkinson

Burt Pines, city attorney
Charles Navarro, controller

City Planning Commission

Fred E. Case, president
Mrs. S. Neiman, vice president
Leonard Levy
Sherrill D. Luke
Peter Marcuse



City Planning Department

Calvin S. Hamilton, director
Frank P. Lombardi, executive officer
Glenn F. Blossom, city planning officer

Citywide Planning and Development Division
Glenn O. Johnson, division head

Citywide Elements Section
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Conservation Plan Task Force
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Robert Nelson, cartographer
Donald Bramlett, cartographer
Ed Rondot, illustration unit head
Mason Dooley, photographer

Typesetting by Kathleen Wilson

CONSERVATION PLAN
PLATE NO. I

WATER SYSTEM NEEDS

-  or  Major Reservoir
-  Well Field
-  Spreading Ground
-  Major Water Main
-  Pumping Station
-  Tertiary Treatment Plant

Metropolitan Water District Facilities

-  Trunklines
-  Connections

NOTE: Open symbols and dashed lines indicate proposed facilities.

1. This Plan reflects the backbone elements of the City's water system. Due to the scale of the map, additional components of the City's water supply system including feeder lines, local water mains, minor reservoirs and pumping stations are not indicated. The City's water system, including feeder lines to currently undeveloped areas will be designed to accommodate future needs of the area based on population, land use and fire protection.

2. Detailed facility location, water service availability and related items should be confirmed with the water system of the Department of Water and Power.



CONSERVATION PLAN
PLATE NO. II

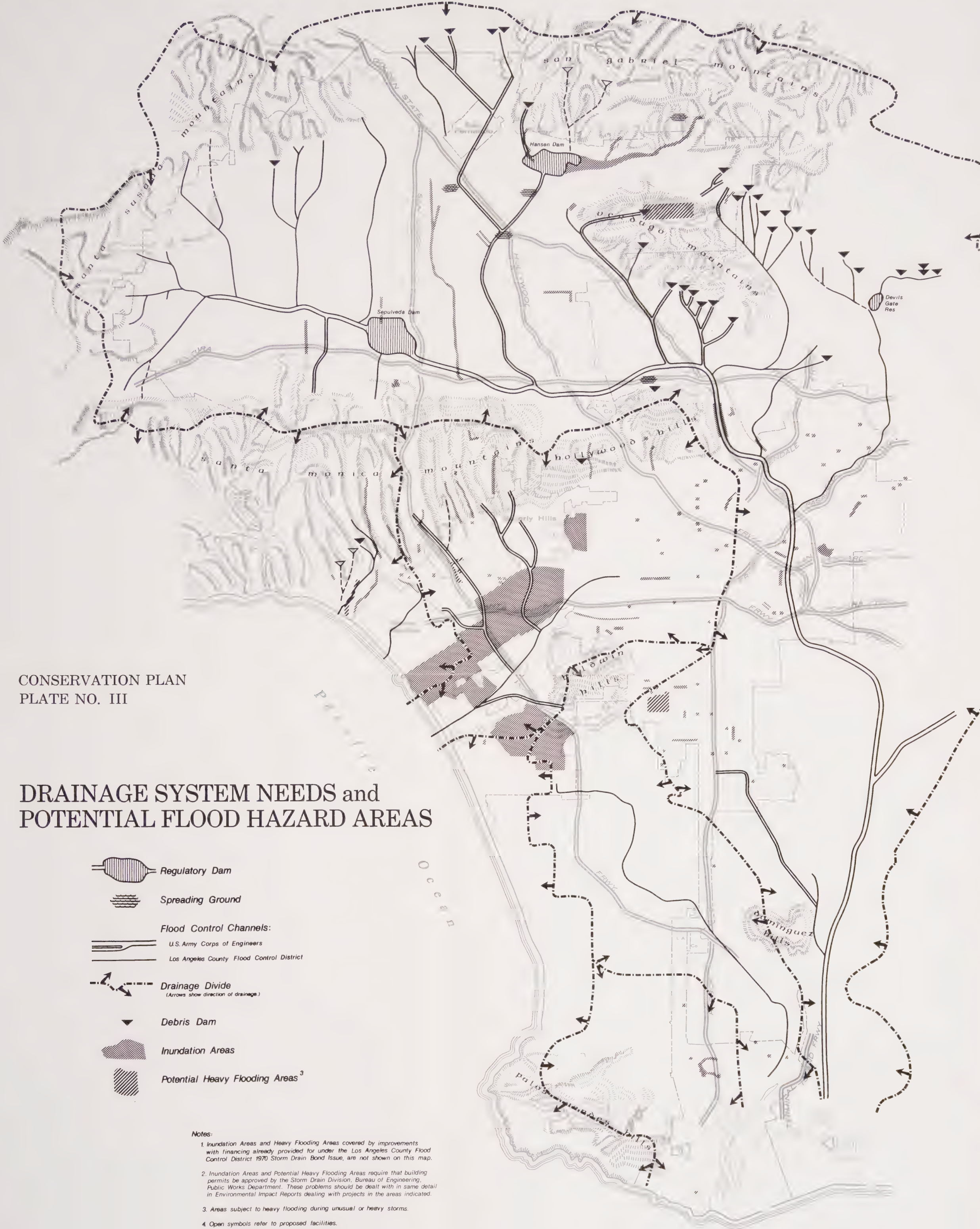
WASTEWATER SYSTEM NEEDS

Needs
Includes New Facilities or
Improvement of Existing Facilities

	Existing	Upgrading and Capacity	Water Quality and Capacity
Pumping Plant			
Maintenance Yard			
Treatment Plant			
Water Reclamation Plant			
Major Conduit			
Existing			
Financed			
Proposed Projects			

- Notes:
1. For detailed information on individual projects, refer to the City's Capital Improvement Program.
 2. Capacity deficiency will be relieved when the Manchester Avenue Pumping Plant and the Manchester Avenue Force Main are completed.
 3. A Wastewater System Plan has been prepared as an Element of the City's General Plan. Additional information on the Wastewater System may be obtained by referring to this plan.





CONSERVATION PLAN
PLATE NO. III

DRAINAGE SYSTEM NEEDS and
POTENTIAL FLOOD HAZARD AREAS

- Regulatory Dam
- Spreading Ground
- Flood Control Channels:
 - U.S. Army Corps of Engineers
 - Los Angeles County Flood Control District
- Drainage Divide
(Arrows show direction of drainage.)
- Debris Dam
- Inundation Areas
- Potential Heavy Flooding Areas³

Notes:

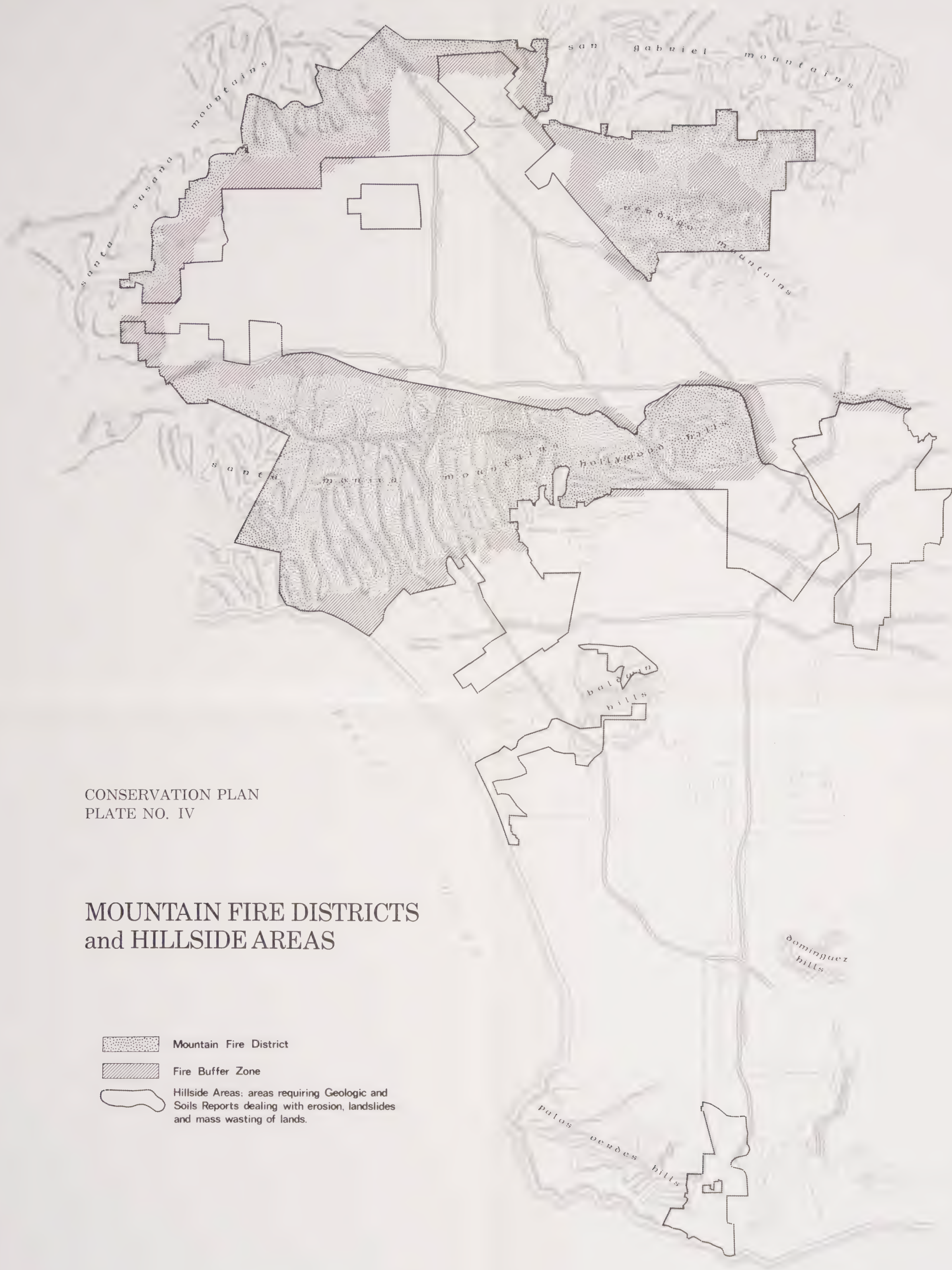
1. Inundation Areas and Heavy Flooding Areas covered by improvements with financing already provided for under the Los Angeles County Flood Control District 1970 Storm Drain Bond Issue, are not shown on this map.
2. Inundation Areas and Potential Heavy Flooding Areas require that building permits be approved by the Storm Drain Division, Bureau of Engineering, Public Works Department. These problems should be dealt with in same detail in Environmental Impact Reports dealing with projects in the areas indicated.
3. Areas subject to heavy flooding during unusual or heavy storms.
4. Open symbols refer to proposed facilities.
5. Dashed lines indicate proposed Flood Control Channels.
6. Drainage Divides are general in location, and are for orientation purposes only.
7. For more detailed information, refer to the Drainage System Element of the General Plan and to the District Offices of the Bureau of Engineering.

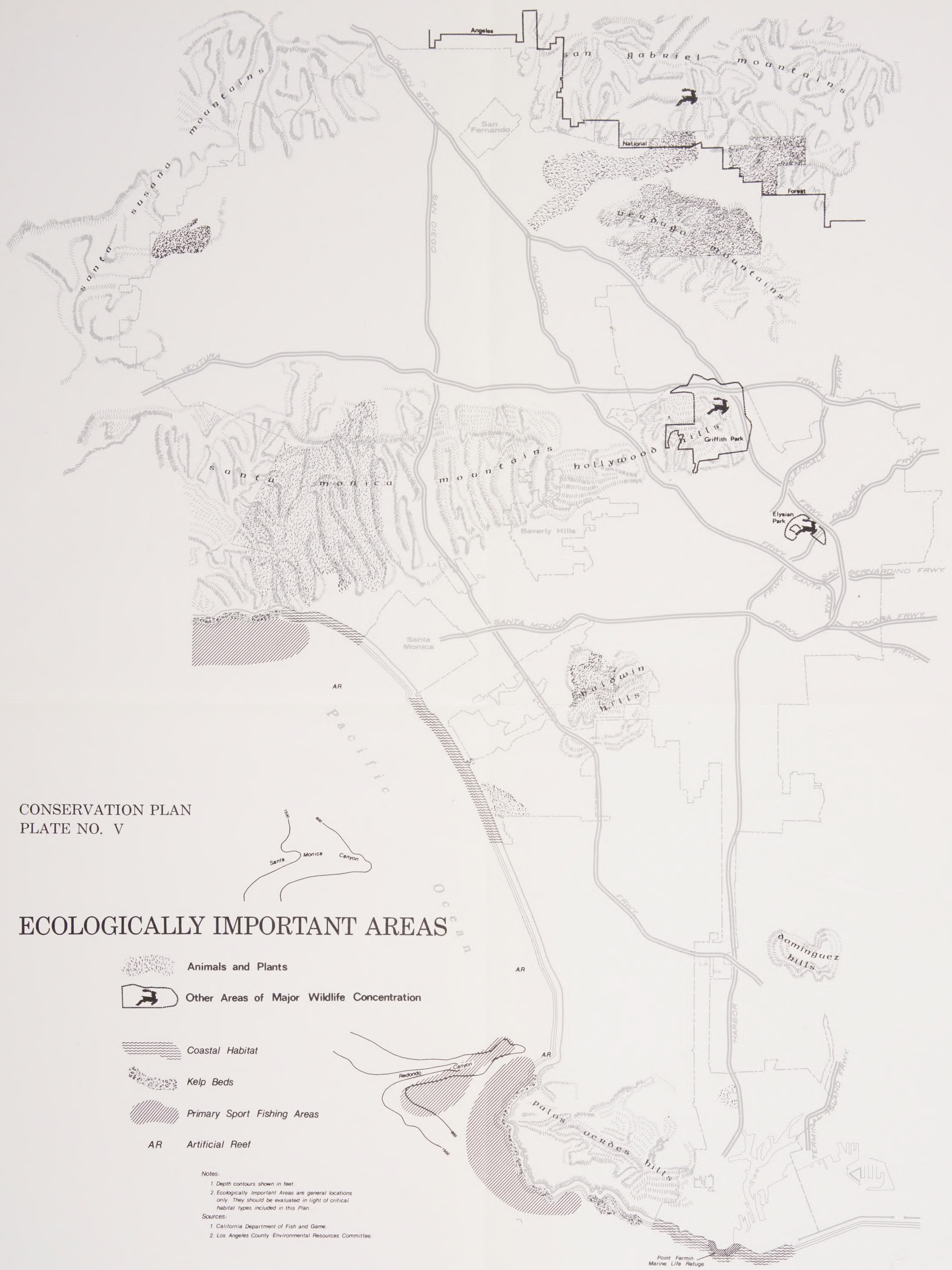


CONSERVATION PLAN
PLATE NO. IV

MOUNTAIN FIRE DISTRICTS and HILLSIDE AREAS

-  Mountain Fire District
-  Fire Buffer Zone
-  Hillside Areas: areas requiring Geologic and Soils Reports dealing with erosion, landslides and mass wasting of lands.





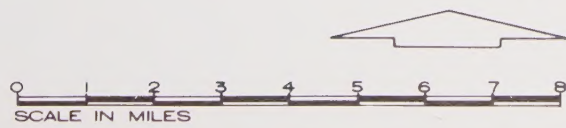
CONSERVATION PLAN
PLATE NO. V

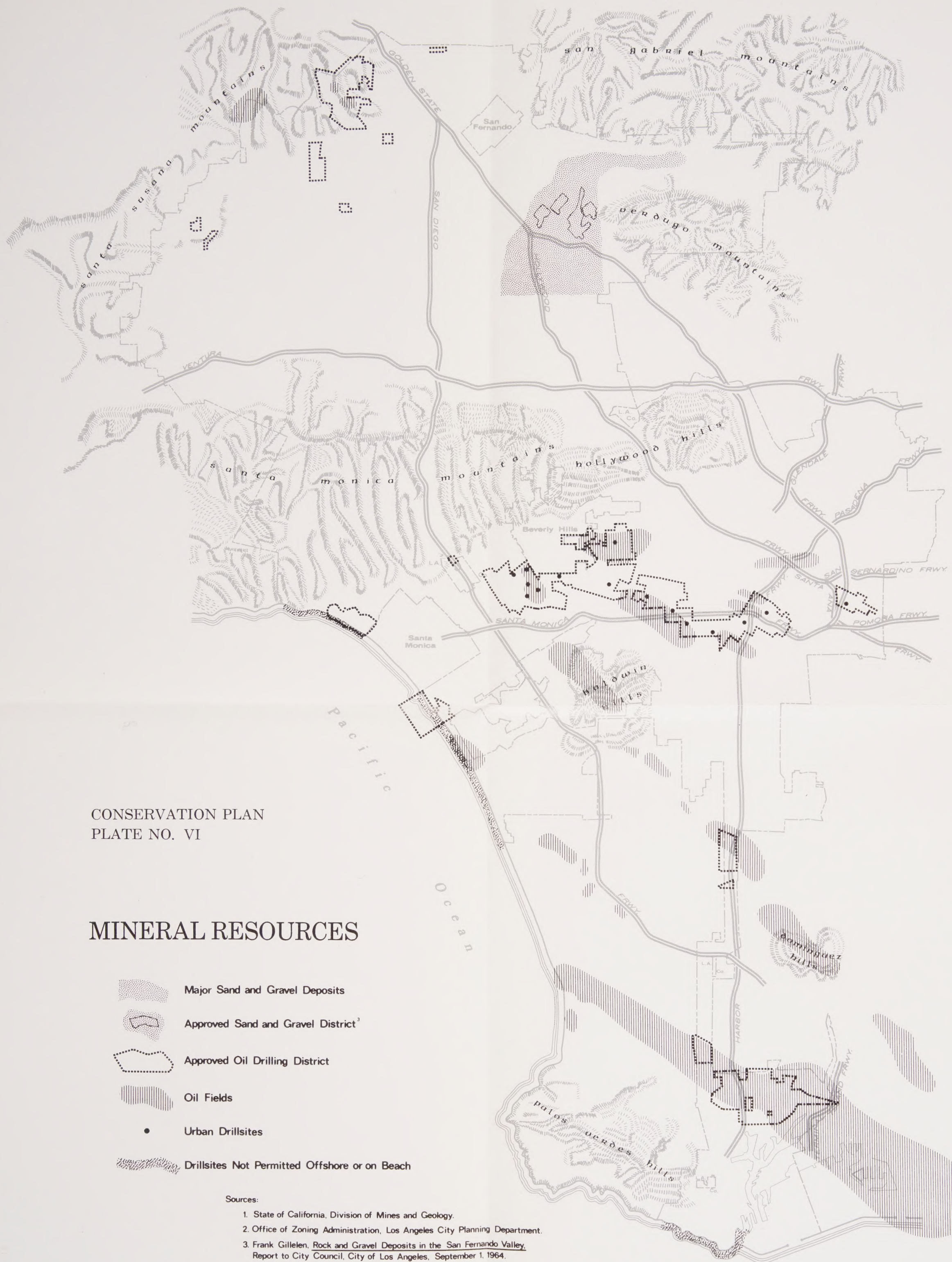
ECOLOGICALLY IMPORTANT AREAS

- Animals and Plants
- Other Areas of Major Wildlife Concentration
- Coastal Habitat
- Kelp Beds
- Primary Sport Fishing Areas
- AR Artificial Reef

Notes:
1. Depth contours shown in feet.
2. Ecologically Important Areas are general locations only. They should be evaluated in light of critical habitat types included in this Plan.

Sources:
1. California Department of Fish and Game.
2. Los Angeles County Environmental Resources Committee.



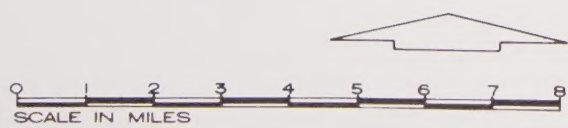


CONSERVATION PLAN
PLATE NO. VI

MINERAL RESOURCES

- Major Sand and Gravel Deposits
- Approved Sand and Gravel District¹
- Approved Oil Drilling District
- Oil Fields
- Urban Drillsites
- Drillsites Not Permitted Offshore or on Beach

- Sources:
1. State of California, Division of Mines and Geology.
 2. Office of Zoning Administration, Los Angeles City Planning Department.
 3. Frank Gillelen, Rock and Gravel Deposits in the San Fernando Valley, Report to City Council, City of Los Angeles, September 1, 1964.
 4. For Details on Sand and Gravel Extraction Phasing, refer to Plate VI - A; Recommended Phasing Guide: Sand and Gravel Extraction Activities.





CONSERVATION PLAN
PLATE NO. VI-A

RECOMMENDED PHASING GUIDE SAND AND GRAVEL EXTRACTION ACTIVITIES

PHASING SCHEDULE

-  Resource Depleted
-  Existing Operations
-  Future Controlled
-  No Mining During Life of Plan
-  (G) Gravel District

NOTES:

1. Dredging or extraction under authority of the Corps. of Engineers.
2. The concept of phasing sand and gravel extraction is recommended to (1) conserve the resource, (2) facilitate recovery of all the resource, and (3) minimize the impact of extractive activities upon residential and commercial areas. The recommended phasing program is illustrated as follows: when a company completes its existing operations in one area (Phase I), the next area of operation should involve lands designated as Future Controlled (Phase II).



CONSERVATION
PLAN